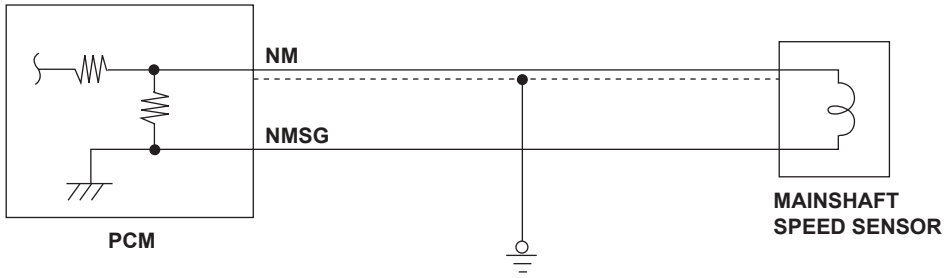
DTC P0715: Problem in Mainshaft Speed Sensor Circuit



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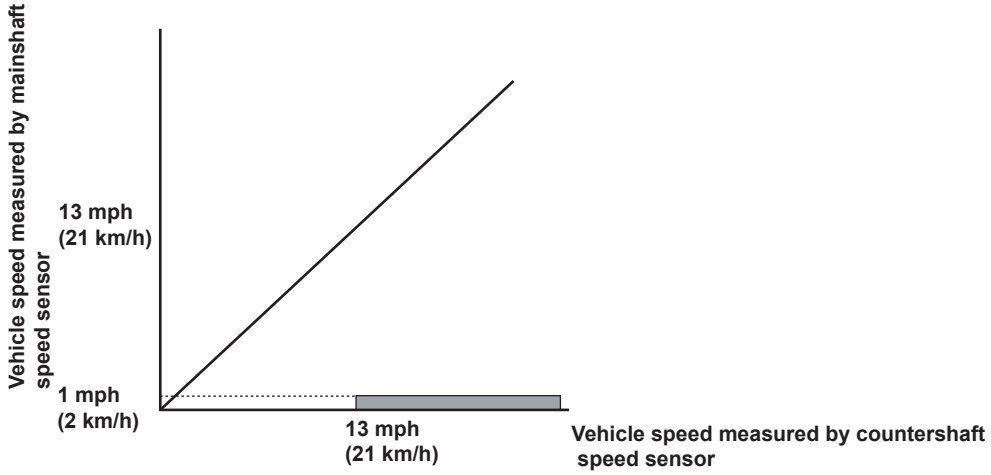
Failure Area



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General Description

The mainshaft speed sensor is attached to the outside of the transmission housing. The mainshaft speed sensor generates a pulsing signal according to the speed of the mainshaft idler gear on the mainshaft. Using that signal, the powertrain control module (PCM) determines the speed of the mainshaft. If no pulses occur with the mainshaft rotating, the PCM detects a malfunction that may be caused by an open, a temporary open, or a short to ground. Based on the correlation between the vehicle speed measured by the countershaft speed sensor and the mainshaft speed sensor, a malfunction is detected and a DTC is stored.

Monitor Execution, Sequence, Duration, DTC Type

Execution	Under the Enable Conditions
Sequence	None
Duration	10 seconds
DTC Type	One drive cycle, MIL ON, D4 indicator blinks

Enable Conditions

Condition	Minimum	Maximum
Vehicle speed	13 mph (21 km/h)	—
No active DTCs	Mainshaft speed sensor, Countershaft speed sensor, Shift solenoid valves A, B, and C, Transmission range switch, Torque converter clutch solenoid valve, A/T clutch pressure control solenoid valves A and B	

Malfunction Threshold

When the vehicle speed measured by the countershaft speed sensor is 13 mph (21 km/h) or more, the vehicle speed measured by the mainshaft speed sensor is less than 1 mph (2 km/h) for at least 10 seconds.

Driving Pattern

Start the engine, and drive the vehicle at a speed of 13 mph (21 km/h) or more in D4 position for at least 10 seconds.

- If you have difficulty duplicating the DTC, retest after turning off electrical components such as the audio system and the A/C.
- Drive the vehicle in this manner only if the traffic regulations and ambient conditions allow.

Diagnosis Details

Conditions for illuminating the MIL
When a malfunction is detected, the MIL comes on and the DTC and the freeze frame data are stored.

Conditions for clearing the MIL
The MIL, the DTC, and the freeze frame data can be cleared by using the scan tool Clear command or by disconnecting the battery.